

# International EDI Services and Software Markets

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INPUT

Tokyo—September 12, 1989



## VAN (U.S.)

- Communications Related  
"Value Added":
  - Protocol, Speed Conversions
  - Buffering, Store & Forward
- A Link to Applications, Services,  
Data Bases, Other Companies

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NOTES:

EQAD-5



## Remote Computer Service (Service Bureau)

- Data Entry, Processing
- May Use Tapes, Diskettes
- VANS Communicate to RCS

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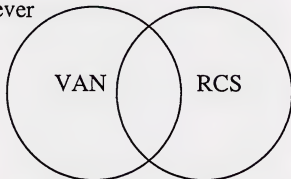
NOTES:

EQAD-6



## VAN & RCS

However



The Difference is the Network

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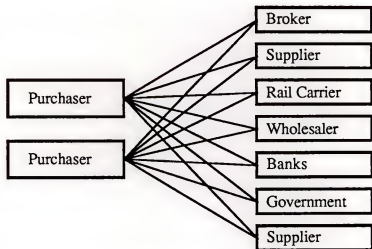
NOTES:

EQAD-7





## EDI Links Can Get Complicated



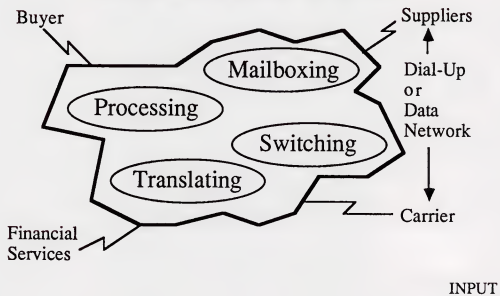
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NOTES:

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## VAN/RCS Role in EDI



NOTES:

ECO3-VW-3



# Electronic Data Interchange

The Application-to-Application Exchange  
of Intercompany Business Data  
in Standard Formats

INPUT

NOTES:

ECON-VW



## Why Not FAX?

- FAX Requires/Creates Hardcopy
- FAX is NOT Machine Readable
- FAX is a Direct (Long Distance) Connection
- FAX Takes Minutes to Transmit
- FAX IS NOT EDI!!!

INPUT

Notes:





## Interchange Alternatives

- Tape/Diskette Exchange
  - Cost
  - Security
  - Speed

INPUT

Notes:



## Interchange Alternatives

- Direct Point-to-Point
  - Cost/Volume Justification
  - Network Management Issues
    - Scheduling
    - Contention
    - Equipment

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Notes:



## Interchange Alternatives

- Third Party Network
  - Rapid Start-Up
  - Support Issues
  - Existing Trading Community
  - Value Added Services

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Notes:



## Varieties of EDI

Mainline -	Purchasing Logistics EFT + Data
EMCS/ECS -	Medical Claims
Interface -	Insurance

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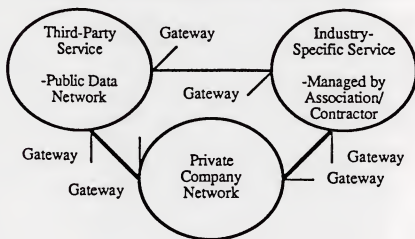
NOTES:

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### THREE TYPES OF EDI NETWORKS



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NOTES:

ETOK-92

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## Major EDI Services

G.E. Information Services

The EDI Express

McDonnell Douglas Electronic  
Data Interchange Systems Co.

EDI Net

Sterling Software

Ordernet

IBM

Information Exchange

Control Data

Redinet

INPUT

NOTES:

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## GEIS

- Aggressive
- Worldwide Alliances
- EDI/PETROEX
- Design✕Express
- UPC✕Express
- EPS✕Express

INPUT

NOTES:

EQAD-20

ETOK-16



## SSW Ordernet

- Grocery
- Drugs, Med/Surg
- Hard Goods
- Service Merchants
- Logistics
- Software

## Telenet

INPUT

NOTES:

ECO4-VW1-6





## SSW Ordernet

- Australia—ACI
- Japan—Global VAN
- Others—?

INPUT

Notes:



## McDonnell Douglas EDI\*Net

- Grocery
- Logistics
- Software Certification
- Cross-Industry

Sold to British Telecom

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NOTES:

ECO4-VW1-7



## IBM

- Information Network—SNA
- Intercontinental Services
- Internal Use
- Insurance, Health Care,  
Electronics, Retail, Etc.
- ExpEDItte Family

INPUT

NOTES:

ECO4-VW1-8

10 3872

## AT&T

- ~~Net 1000~~
- AT&T Mail—EDI "Offering"
- X.400-Based
- Turnkey Systems—RIVET
- Japan Joint Venture—ENS

INPUT

NOTES:

EQAD-22

ETOK-18





## Control Data

- Redinet service
- Low cost/flat rate
- Low-cost software

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Notes:



## Sears Communications

- SNA-based
- Services Sears suppliers, others
- Charges sender only

INPUT

Notes:



## Harbinger

- Low Cost PC Software
- Interconnect through Harbinger's Network
- Sold to Small Suppliers of Large Companies
- Adding EDI/EFT Services

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NOTES:

ECO4-VW1-12



## Telecom Canada

- Trade route on envoy 100
- Links to Telenet, AT&T
- X.400-based
- No network translation

INPUT

Notes:





## Bell Operating Companies

- LADT = Local Access Data Transport
- EDI Applied to Corporate Billing
- As Users

INPUT

Notes:



## Bell Operating Companies

- Options:
  - Resale
  - E-Mail application
  - Education and training, enablement
- Preliminary market probes/no EDI services

INPUT

Notes:



## Major International/Global EDI Services

- GEIS
- IBM
- British Telecom (Tymnet)
- CSC (service pending)

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Notes:



## Major European EDI Services

- INS (ICL and GEIS)
- Istel
- IBM—joint ventures
- EDS
- PTTs (example: Transpac)
- GSI
- Siemens

INPUT

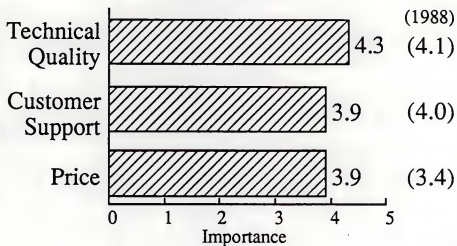
Notes:





## Average Primary Network Ratings

1989 Survey



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NOTES:

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## EDI—The Year(s) Ahead

### Services—New Entrants

- ADP
- BOCs
- NDC
- EDS

"Secondary" Players Find Niches

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NOTES:

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## Full Service Versus Commodity Service

- Full
  - Implementation Assistance
  - Translation, Tracking
  - Reports, Compliance Checking
- Commodity
  - Lower Cost, Few Features
- Analogy: Federal Express Vs. Bulk Mail

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Notes:



## Private EDI Networks

Rockwell	Auto Makers
Caterpillar	Hewlett-Packard
Sears/Penneys	American Hospital Supply
General Foods	Levi-Strauss
Motorola	Others

INPUT

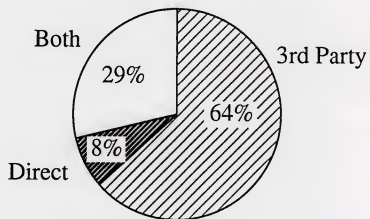
NOTES:

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## Third Party or Direct EDI?



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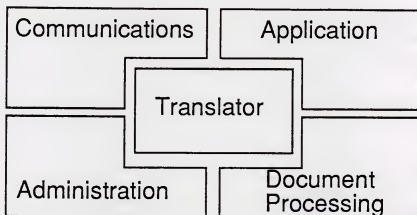
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## EDI Software Is a Translator and More



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NOTES:

EEDS-4



## SOFTWARE VENDOR CATEGORIES

CATEGORY	COMMENTS
Start-Ups	Entrepreneurial, Some Spin-Offs of Consulting Firms
VAN/RCS	Goal is to Increase Network Traffic
Established Application Vendors	Adding EDI Functions to Existing Software

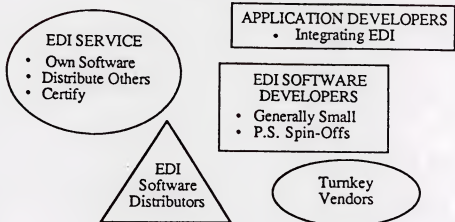
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NOTES:

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## THE EDI SOFTWARE MARKET IS FRAGMENTED



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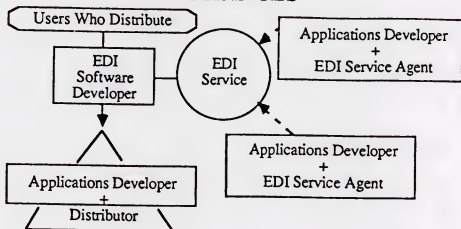
NOTES:

ETOK-28





## PARTICIPANTS ARE FORMING ALLIANCES



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NOTES:

ETOK-29



## EDI Software Leaders

- GEIS
- Supply-Tech
- Sterling Software
- Metro-Mark
- ACS Network Systems
- TranSettlements

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Notes:



## Major European Software Firms

- SD-Scicon
- GLI
- Perwill
- Sitpro
- Digital

INPUT

Notes:



## Survey Results

INPUT

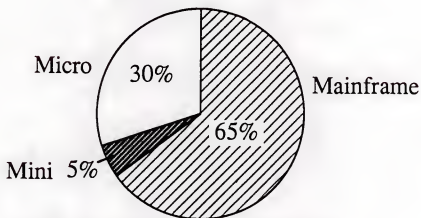
NOTES:

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## Computer Primarily Used for EDI?



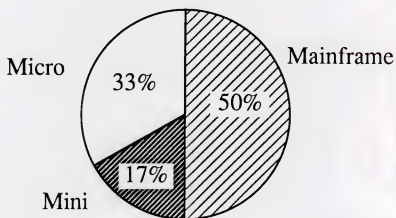
58% of the primary computers are  
networked—mostly micro/mainframe INPUT

NOTES:

ECO3-VW-22



## Total Western Europe



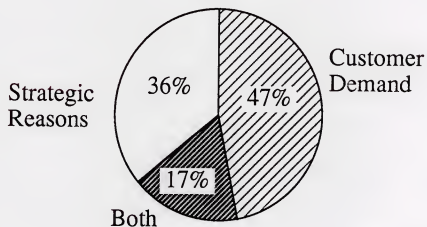
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NOTES:

ECOE-TS-23a



## Why Was EDI Implemented? 1988 Survey



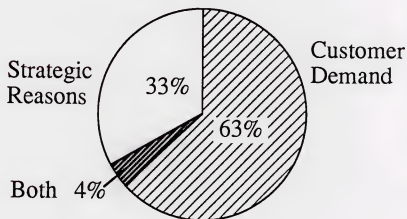
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NOTES:

ECO3-VW-24



## Why Was EDI Implemented? 1989 Survey



INPUT

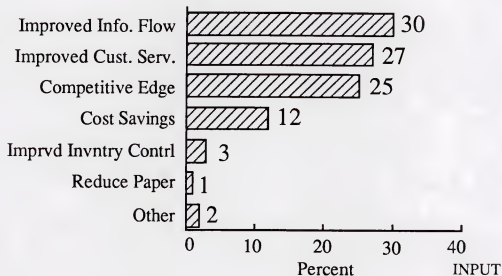
NOTES:

ECO3-VW-25





## EDI Start-Up Reasons (Strategic) (W. Europe)



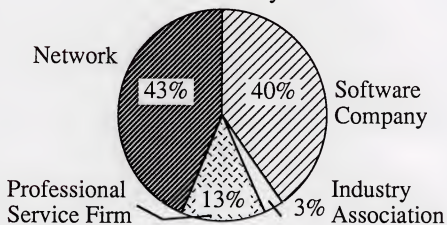
NOTES:

ECOE-TS-13



## EDI Implementation Assistance Source

1989 Survey



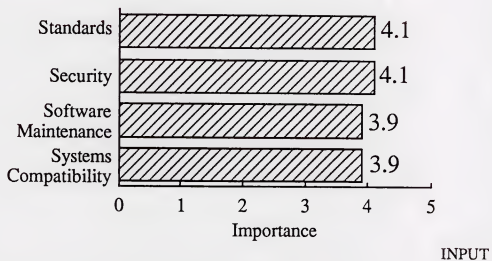
Only 30% had external help

INPUT

NOTES:



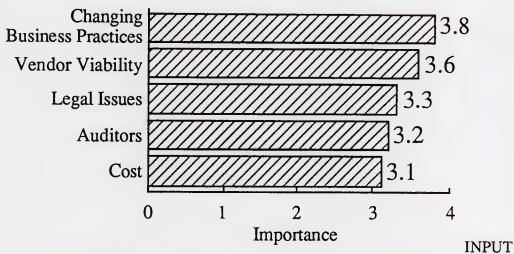
## EDI User Concerns 1989 Survey



NOTES:



## EDI User Concerns 1989 Survey



NOTES:

ECO3-VW-27b

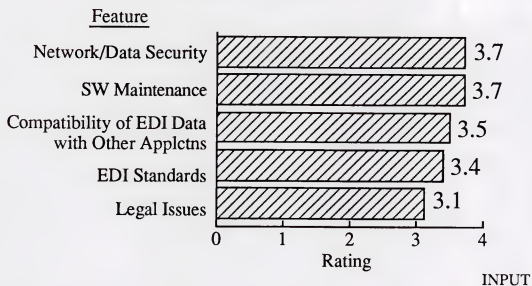
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INPUT





## User Issues & Concerns (W. Europe)

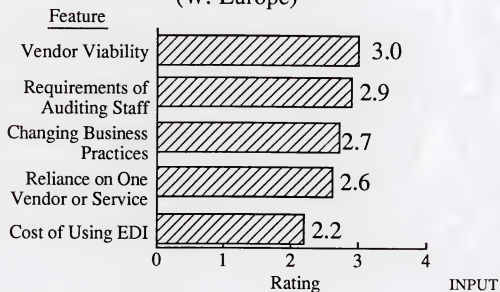


NOTES:

ECO-ES-20a



## User Issues & Concerns (W. Europe)

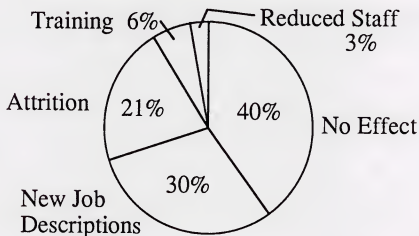


NOTES:

ECOE-TS-20b



## EDI Impact on Human Resources (Of Those Responding)



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NOTES:

ECO3-VW-28



## EDI Impact on Human Resources

“Our business has grown so rapidly. . .  
with EDI we've been able to stay  
up with it without adding staff’

INPUT

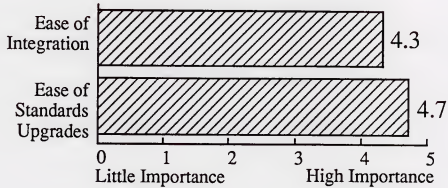
NOTES:

ECO3-VW-29





## Software Features Importance



80% said it was easy to upgrade  
their software to new standards

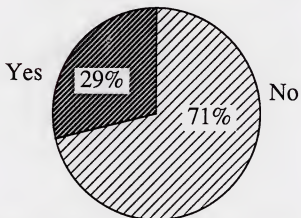
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NOTES:

ECO3-VW-30



## Will You Change Your EDI Software?



Major reason: Upgrading to mainframe

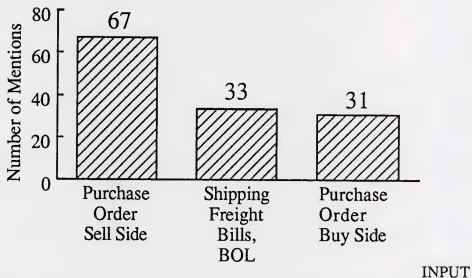
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NOTES:

ECO3-VW-31



## EDI Application Integration



NOTES:

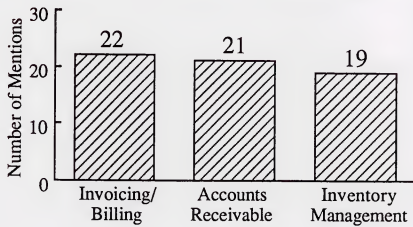
ECO3-VW-32

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INPUT



## EDI Application Integration



INPUT

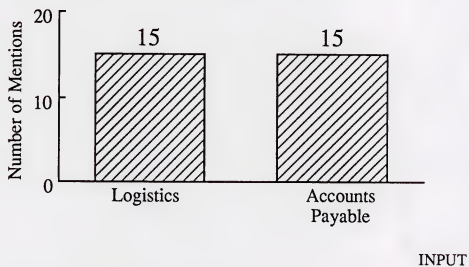
NOTES:

ECO3-VW-33





## EDI Application Integration



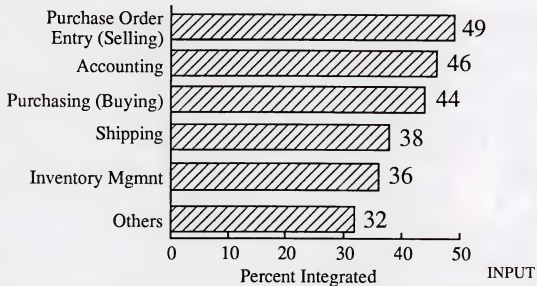
NOTES:

ECO3-VW-34



## Key Applications Integrated with EDI (W. Europe)

### Application

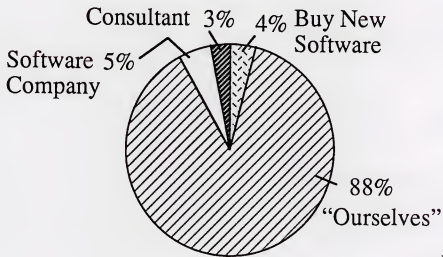


NOTES:

ECOE-TS-21



## Preferred Method of EDI SW Integration



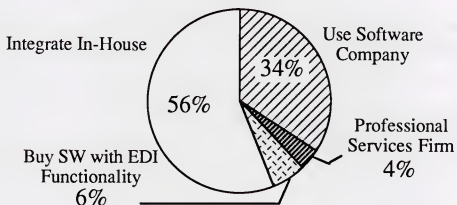
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NOTES:

ECO3-VW-35



## Method of Integrating EDI Software with Other Applications (W. Europe)



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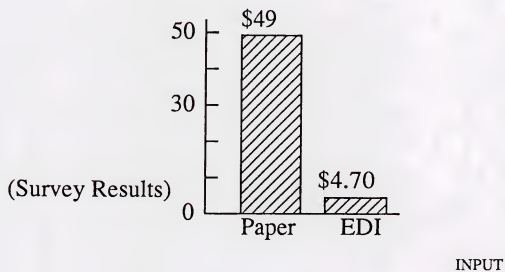
NOTES:

ECOE-TS-22





## Paper versus Electronic Transactions



NOTES:

ECON-VW-28



## EDI Standards

- A Leading Concern
- A Confusing "Alphabet Soup"
- Concerns for Investment/Stability
- Cost of Change? Updates?

INPUT

Notes:



## EDI Standards

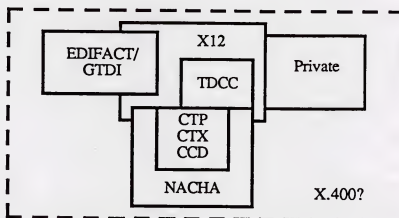
- Industry Specific
- Proprietary
- Generic
- International

INPUT

Notes:



## EDI Standards Relationships



INPUT

NOTES:

USM1-VW-14





## EDI Standards

- Industry Specific Examples
  - UCS Grocery
  - CommNet Medical/Surgical
  - Spec2000 Airline Services

INPUT

Notes:



## EDI Standards

- Proprietary/Company Specific Examples
  - Senden Sears
  - K-Mart

INPUT

Notes:



# EDI Standards

- Generic Examples

INPUT

Notes:



## X12, TDCC (Transportation)

- BUT X12 Subsets are Industry Specific
  - Examples: VICS, EIDX, EDX

INPUT

Notes:





## EDI Standards

- International
  - In-Country (Tradcoms, JCA)
  - International Trade (EDIFACT)

INPUT

Notes:



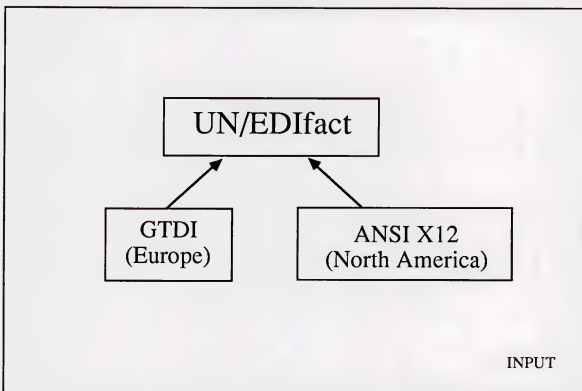
## EDI Standards

- Europe
  - Odette—automobile making
  - Tradacom—retail
  - Dish—trade and transport
  - VDA—West German auto

INPUT

Notes:





NOTES:



## EDIFACT

- EDI for Administration, Commerce and Trade
- UN Sanctioned/Customs, others Endorse
- Shares Data Dictionary with X12
- Different Syntax

INPUT

Notes:





## EDIFACT

- Message Development Slow
- Few Approved Transactions Now
- MultiNationals Using Syntax

INPUT

Notes:



## EDI/EFT Formats

- CCD+ - Single addenda
- CTP - Structured, multiple addenda
- CTX - Free form X12 compatible addenda

INPUT

NOTES:

ECO4-VW2-14



## Standards Interfusion

X12 → Edifact 400

Pro: Edifact—'The True Faith'

Con: X.400 Cycle Is 4 Years  
Varieties of X.400?

When: 2-10 Years

INPUT

NOTES:

ECON-VW-50



## Standards Interfusion

TDCC ↔ X12

Pro: Would Solve Coordination  
Problems

Con: Work Load Issues

When: Now

INPUT

NOTES:

ECON-VW-51





## Standards Interfusion

UCS  $\longleftrightarrow$  X12

Pro: Companies Now Using Both

Con: "Ain't Broke—Why Fix It?"

When: 2-5 Years

INPUT

NOTES:

ECON-VW-52



## Standards Interfusion

Proprietary/  
Industry-Specific —————→ X12

Pro: "Go with the Flow"

Con: Ease of Change

When: Now

INPUT

NOTES:

ECON-VW-53



## Standards Interfusion

X12  $\longleftrightarrow$  Insurance  
(IIR/Accord)

Pro: Useful in Mortgage Banking,  
Transportation, Others?

Con: Coordination Issues

When: 2 Years (Real Estate)

INPUT

NOTES:

ECON-VW-54



## EDI Standards Recommendations

- Use X12 Current Version
- Support Past Version(s)
- Work with Software Company for Updates
- Monitor EDIFACT for International Use
- Participate in Standards Setting

INPUT

Notes:





# EDI CASE STUDY

## LEVI-STRAUSS

INPUT

USM1-VW-21



## Levi-Strauss

- 17,000 Retailers—200,000 Stores
- Retail Electronic Services—  
a Marketing Group
- Also Responsible for Supplier EDI

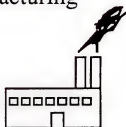
INPUT

USM1-VW-22



Levi-Strauss

**Key Concept:**  
Capture POS Data  
to Drive Manufacturing



INPUT

USM1-VW-23



Levi-Strauss

## Retail Services:

- Sell Through Analysis and Reporting System (STARS)
- Model Stock Management
- Retailer EDI (REDI)
- Purchase Order Reconciliation

INPUT

USM1-VW-24





Levi-Strauss

## Benefits:

- Improved Turns
- Fewer Stock Outs
- Enhanced Retailer Relations

INPUT

USM1-VW-25



# EDI CASE STUDY

## FIRST NATIONAL BANK OF CHICAGO

INPUT

USM1-VW-26



First Chicago

## President's Mandate:

"We Will Do EDI"

- Purchasing
- Potential Service

INPUT

USM1-VW-27



First Chicago

1985: No Supplier Was Ready

So: Loaned Software  
Underwrote Costs  
Free Training & Installation

INPUT

USM1-VW-28





First Chicago

## Cost Benefit Analysis (1985):

Would Cost More—Not Less

- Dual Systems
- But Costs have Moderated

INPUT

USM1-VW-29



First Chicago

## Implementation

- 65 Staff on Project
- "Bilingual" Users' Guide
- 25-Point Software and Network Evaluation

INPUT

USM1-VW-30



First Chicago

## Transactions

	<u>Electronic</u>	<u>Paper</u>
1986	1,200	1 million
1987	4,800	
1988	20,000	50,000

INPUT

USM1-VW-31

